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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,316	02/20/2001	Simone Masetti	PETR/SF/5608 US-B	2019

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EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/785,316

Applicant(s)

MASETTI, SIMONE

Examiner

Jennifer A Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/19/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The Applicant's Amendments and Accompanying Remarks, filed March 19, 2003, have been entered as Paper No. 6 and have been carefully considered. The Specification and Abstract have been amended. Claims 1 – 22 have been cancelled and claims 23 – 44 have been added. Claims 23 – 44 are pending. In view of Applicant's Amendment, the Examiner withdraws the objection to claims 1 – 22 as set forth in paragraph 1 of Paper No. 5 and the 35 U.S.C. 112, 2nd paragraph rejection of claims 3, 7 and 20 as set forth in paragraph 2 of Paper No. 5. The Examiner also withdraws the 35 U.S.C. 102(b) rejection and all 35 U.S.C. 103(a) rejections as set forth in paragraphs 3 – 8 of Paper No. 5. Despite these advances, the invention is not found to be patentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 23 – 26, 29, 39 and 42 - 44 are rejected under 35 U.S.C. 102(a)(e) as being anticipated by Van Kerrebrouck (US 6,066,388).

As to claims 23, 24, 40 and 42 – 44, Van Kerrebrouck teaches a nonwoven comprising two outer fiber layer (3,4) and at least one inner fiber layer (2) having a different composition from that of the outer layers (3,4). The Examiner equates the Applicant's "material" to the combination of the outer fiber layer (3) and inner fiber layer (2). The outer fiber layer (3) comprises structural fibers (7) and binding fibers (5). (Abstract) The binding fibers, equated to Applicant's "largest one of plural fibers", have a linear density between 0.5 - 28 dtex (0.45 – 25.2 denier) as required by claim 24 (column 3, lines 42 – 45) The constructive fibers, equated to Applicant's "finest one of plural fibers", have a linear density between 0.5 - 28 dtex (0.45 – 25.2 denier). (column 3, lines 47 – 50) as required by claim 24. Therefore, the ratio between the denier of the largest plural fibers to the finest plural fibers is 1:1 to 56:1 as required by claim 23. The binding fibers are composed at least partially of thermoplastic polymer (synthetic fibers) as required by claim 23. The binder fibers can be two-component fibers as required by claim 40. It should be noted that the Applicant states in the Specification that the use of fibers with different deniers in a nonwoven structure gives the nonwoven the capability of developing an electrostatic charge (page 3, lines 20 – 30). Since different denier fibers are present in the ratio claimed by the Applicant, the Examiner assumes that the fabric will develop an electrostatic charge while in use.

As to claims 25 and 26, Van Kerrebrouck teaches that the outer fiber layer (3), or "material", comprises from 40% to 100% binding fibers, or "largest one of plural fibers", and 0% to 60% of constructive fibers, or "finest one of plural fibers", and preferably from 60% to 80% of

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binding fibers and 20% to 40% of constructive fibers. (column 3, lines 20 – 25). Therefore, at least 3%, as required by claim 25 and at least 50% as required by claim 26 of the surface of the outer fiber layer will comprise the constructive fibers, or “finest one of the plural fibers”.

As to claim 29, Van Kerrebrouck teaches that the fibers comprising the nonwoven outer fiber layer comprise polyester, polyamide or polyolefin. (column 3, lines 53 – 60)

As to claim 39, Van Kerrebrouck teaches that the outer fiber layer (3) and the one inner fiber layer (2) are attached to another outer layer, equated to Applicant's “mesh of reinforcing material”. (Abstract)

Claim Rejections - 35 USC § 103

5. Claims 27 – 28 and 30 - 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kerrebrouck (US 6,066,388).

As to claims 27, 28 and 41, Van Kerrebrouck discloses the claimed invention except for a density of about 0.6 g/cm^3 as required by claim 27 and the capacity to acquire an electric charge of at least 1 Volt as required by claim 28 or charge varying from 1.22 to 3.23 Volts as required by claim 41. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a nonwoven with a density of about 0.6 g/cm^3 as required by claim 27 and the capacity to acquire an electric charge of at least 1 Volt as required by claim 28 or charge varying from 1.22 to 3.23 Volts as required by claim 41, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955).

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In the present invention, one would have been motivated to optimize the density of the fabric and the capacity to acquire an electric charge to maximize the take-up rate of dirt particles.

As to claims 30 – 38, Van Kerrebrouck discloses the claimed invention except for a composition of 90% of 1.5 denier, as required by claim 30, or 1 denier, as required by claim 31, polyester fibers, and 10% of 0.14 denier polyester fibers as required by claims 30 and 31; a composition of 80% of 1.5 denier, as required by claim 32, or 1 denier, as required by claim 33, polyester fibers, and 20% of 0.14 denier polyester fibers as required by claims 32 and 33; a composition of 70% of 1 denier polyester fibers and 30% of 0.14 denier polyester fibers as required by claim 34; a composition of 50% of 1 denier and 50% of 0.14 denier polyester fibers as required by claim 35; a composition of 50% of 1.5 denier, 30% of 1 denier and 20% of 0.14 denier as required by claim 36 and a composition of 50% of 1.5 denier, 30% of 0.8 denier and 20% of 0.14 denier as required by claim 37. It should be noted that the denier and composition are result effective variables. For example, as the denier increases, the material becomes more rigid and strong. As the composition comprises a higher percentage of finer denier fibers, the material becomes more flexible, porous and lightweight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a filter material as described above, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the proportions of fibers and the denier used in order to have a flexible and lightweight and sufficiently strong material.

As to claim 38, the limitations are not given any patentable weight because they are process limitations which do not have any impact on the characteristics of the final product.

Response to Arguments

6. Applicant's arguments with respect to claims 1 - 22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jennifer Boyd
June 2, 2003

